In the claims:

Claims 1, 2, 31, 32 and 35 of claims 1-36 are amended.

New claims 37 and 38 are added.

1. (Currently Amended) A method of making a magnetic head assembly wherein the magnetic head assembly has a write head with a pole tip comprising the steps of:

forming a shaping layer on an underlying layer wherein the underlying layer has a flat surface and wherein the shaping layer has a side surface and a top surface;

~~depositing~~ ion beam sputtering a ferromagnetic material layer on the underlying layer and on the side and top surfaces of the shaping layer[[; and]] with the sputtering being directed at an angle to a normal to said flat surface; and

removing first and second portions of the ferromagnetic material layer from the underlying layer and the top surface of the shaping layer respectively leaving a remaining portion of the ferromagnetic material layer on the side surface of the shaping layer as said pole tip.

2. (Currently Amended) A method as claimed in claim 1 wherein ~~said depositing is ion beam sputtering at an angle to a normal to said flat surface.~~ said angle is from greater than 45° to 90°.

3. (Original) A method as claimed in claim 2 wherein the method further includes removing the shaping layer.

4. (Previously Presented) A method as claimed in claim 2 further including making a read head including the steps of:

forming nonmagnetic first and second read gap layers;

forming a read sensor between the first and second read gap layers; and

forming the first and second read gap layers between a first shield layer and a first pole piece layer.

5. (Withdrawn) A method as claimed in claim 2 wherein the underlying layer is a write gap layer.

6. (Withdrawn) A method as claimed in claim 5 including the steps of:

forming a first pole piece layer;

forming the write gap layer on the first piece layer;

forming the pole tip on the write gap layer;

forming an insulation stack with at least one coil layer embedded therein on the first pole piece layer; and

forming a second pole piece layer on the insulation stack and stitched to said pole tip.

7. (Withdrawn) A method as claimed in claim 2 wherein the underlying layer is a first pole piece layer.

8. (Withdrawn) A method as claimed in claim 7 including the steps of:

forming the pole tip on the first pole piece layer;

forming a write gap layer on the pole tip;

forming an insulation stack with at least one write coil layer embedded therein on the first pole piece layer; and

forming a second pole piece layer on the write gap layer and on the insulation stack.

9. (Original) A method as claimed in claim 2 wherein the forming of the shaping layer comprises the steps of:

forming a photoresist layer on the underlying layer; and

forming the photoresist layer with said side surface wherein the side surface coincides with an edge site of the pole tip.

10. (Withdrawn) A method as claimed in claim 9 wherein a thickness of the photoresist is the same as a height of the pole tip.

11. (Withdrawn) A method as claimed in claim 10 wherein the underlying layer is a write gap layer.

12. (Withdrawn) A method as claimed in claim 11 including the steps of:

forming a first pole piece layer;

forming the write gap layer on the first piece layer;

forming the pole tip on the write gap layer;

forming an insulation stack with at least one coil layer embedded therein on the first pole piece layer; and

forming a second pole piece layer on the insulation stack and stitched to said pole tip.

13. (Withdrawn) A method as claimed in claim 12 wherein the method further includes removing the shaping layer.

14. (Withdrawn) A method as claimed in claim 12 further including making a read head including the steps of:

forming nonmagnetic first and second read gap layers;

forming a read sensor between the first and second read gap layers; and

forming the first and second read gap layers between the first shield layer and the first pole piece layer.

15. (Withdrawn) A method as claimed in claim 10 wherein the underlying layer is a first pole piece layer.

16. (Withdrawn) A method as claimed in claim 15 including the steps of:

forming the pole tip on the first pole piece layer;

forming a write gap layer on the pole tip;

forming an insulation stack with at least one write coil layer embedded therein on the first pole piece layer; and

forming a second pole piece layer on the write gap layer and on the insulation stack.

17. (Withdrawn) A method as claimed in claim 16 wherein the method further includes removing the shaping layer.

18. (Withdrawn) A method as claimed in claim 16 further including making a read head including the steps of:

forming nonmagnetic first and second read gap layers;

forming a read sensor between the first and second read gap layers; and

forming the first and second read gap layers between the first shield layer and the first pole piece layer.

19. (Previously Presented) A method of making a magnetic head assembly wherein the magnetic head assembly has a write head with a pole tip comprising the steps of:

forming a shaping layer on an underlying layer wherein the underlying layer has a flat surface and wherein the shaping layer has a side surface and a top surface;

depositing a ferromagnetic material layer on the underlying layer and on the side and top surfaces of the shaping layer by ion beam sputtering the ferromagnetic material at an angle to a normal to said flat surface; and

removing first and second portions of the ferromagnetic material layer from the underlying layer and the top surface of the shaping layer respectively leaving a remaining portion of the ferromagnetic material layer on the side surface of the shaping layer as said pole tip;

said forming of the shaping layer comprising the steps of:

forming a first photoresist layer on the underlying layer wherein the first photoresist layer has a thickness;

forming a masking layer on the first photoresist layer;

forming a second photoresist layer on the masking layer with a thickness that is less than the thickness of the first photoresist layer;

forming the second photoresist layer with an edge which coincides with an edge site of said pole tip; and

reactive ion etching the masking layer and the first photoresist layer to form the masking layer and the first photoresist layer with said side surface for forming an edge of said pole tip.

20. (Original) A method as claimed in claim 19 wherein a material of the mask is selected from the group consisting of silicon dioxide, silicon nitride, silicon oxynitride, tantalum oxide and titanium dioxide.

21. (Original) A method as claimed in claim 19 wherein the forming of the shaping layer further includes removing the second photoresist layer.

22. (Original) A method as claimed in claim 19 wherein a total of thicknesses of the first photoresist and the masking layer equals a height of the pole tip.

23. (Original) A method as claimed in claim 22 wherein the underlying layer is a write gap layer.

24. (Original) A method as claimed in claim 23 including the steps of:

forming a first pole piece layer;

forming the write gap layer on the first piece layer;

forming the pole tip on the write gap layer;

forming an insulation stack with at least one coil layer embedded therein on the first pole piece layer; and

forming a second pole piece layer on the insulation stack and stitched to said pole tip.

25. (Previously Presented) A method as claimed in claim 24 wherein removing the shaping layer after leaving a remaining portion of the ferromagnetic material layer on the side surface of the shaping layer as said pole tip.

26. (Original) A method as claimed in claim 25 further including making a read head including the steps of:

forming nonmagnetic first and second read gap layers;

forming a read sensor between the first and second read gap layers; and

forming the first and second read gap layers between the first shield layer and the first pole piece layer.

27. (Withdrawn) A method as claimed in claim 22 wherein the underlying layer is a first pole piece layer.

28. (Withdrawn) A method as claimed in claim 27 including the steps of:

forming the pole tip on the first pole piece layer;

forming a write gap layer on the pole tip;

forming an insulation stack with at least one write coil layer embedded therein on the first pole piece layer; and

forming a second pole piece layer on the write gap layer and on the insulation stack.

29. (Withdrawn) A method as claimed in claim 28 wherein the forming of the shaping layer further includes:

removing the second photoresist layer; and

removing the shaping layer.

30. (Withdrawn) A method as claimed in claim 29 further including making a read head including the steps of:

forming nonmagnetic first and second read gap layers;

forming a read sensor between the first and second read gap layers; and

forming the first and second read gap layers between the first shield layer and the first pole piece layer.

31. (Currently Amended) A method as claimed in claim [[1]] 2 wherein said side surface is the only side surface of the shaping layer that shapes the pole tip with the shaping layer commencing at said flat surface of the underlying layer and extends upwardly therefrom in a direction normal thereto.

32. (Currently Amended) A method of making a magnetic head assembly wherein the magnetic head assembly has a write head with a pole tip comprising the steps of:

forming a shaping layer on an underlying layer wherein the underlying layer has a flat surface and wherein the shaping layer has a side surface and a top surface;

sputter depositing a ferromagnetic material layer on the underlying layer and on the side and top surfaces of the shaping layer[[; and]] wherein said sputter depositing is ion beam sputtering at an angle to a normal to said flat surface; and

removing first and second portions of the ferromagnetic material layer from the underlying layer and the top surface of the shaping layer respectively leaving a remaining portion of the ferromagnetic material layer on the side surface of the shaping layer as said pole tip.

33. (Previously Presented) A method as claimed in claim 32 wherein the forming of the shaping layer comprises the steps of:

forming a photoresist layer on the underlying layer; and

forming the photoresist layer with said side surface wherein the side surface coincides with an edge site of the pole tip.

34. (Previously Presented) A method as claimed in claim 33 wherein the method further includes removing the shaping layer after leaving a remaining portion of the ferromagnetic material layer on the side surface of the shaping layer as said pole tip.

35. (Currently Amended) A method as claimed in claim 34 ~~wherein said sputter depositing is ion beam sputtering at an angle to a normal to said flat surface.~~ wherein said angle is from greater than 45° to 90°.

36. (Previously Presented) A method as claimed in claim 35 further including making a read head including the steps of:

forming nonmagnetic first and second read gap layers;

forming a read sensor between the first and second read gap layers; and

forming the first and second read gap layers between a first shield layer and a first pole piece layer.

37. (New) A method as claimed in claim 2 wherein said angle is from 65° to 70°.

38. (New) A method as claimed in claim 37 wherein said angle is 70°.